

DETAILED ACTION

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mark Bicks on 03/04/2010.

The application is amended as follow (Amending claims 11, 13, 14, 17, 18, 23, 25, and 29):

11. (currently amended) A method for endoscopic application of self-closing medical clips, comprising the steps of:

placing a distal end of a catheter tube in a body of a living being to be treated;

arranging at least one self-closing medical clip with relatively movable legs in the catheter tube adjacent the distal end by an operator located on a proximal end of the catheter tube, the clip having a first kink in a first area of each leg extending outwardly and increasing a distance between the legs and a second kink in a second area nearer a distal leg end of the clip than the first area but spaced from the distal leg end extending inwardly and forming a point of mutual support for the legs;

pushing the clip out of the distal end;

opening the clip by an actuator having an actuating element with a pull cable acting on the clip, being movable longitudinally in the catheter tube, being actuated by the operator and having a control part converting an actuating force of the actuating element into a motion opening the legs of the clip, the clip being connected to the pull cable by a rear end crosspiece connecting the legs of the clip, the rear end crosspiece having two adjacent through holes through which the pull cable extends in a loop connecting an advancing strand extending from the operator to the rear end crosspiece to a retreating strand extending to the operator from the rear end crosspiece, the crosspiece having a section between the through holes forming a predetermined breaking point; and

detaching the actuating element from the clip after opening of the clip to release and close the legs of the clip to apply the clip and detaching the pull cable from the clip by applying a pulling force on the pull cable to fracture the predetermined breaking point.

13. (currently amended) A method according to claim 11 wherein a plurality of other clips, similar to the one clip, are arranged in succession in the catheter tube; and after application of the clip at the distal end of the catheter tube, the actuator actuating device is functionally linked to the clip next following in the catheter tube.

14. (currently amended) A device for endoscopic application of self-closing medical clips in a body of a living being, comprising:

a catheter tube having a distal end placeable in the body and a proximal end placeable outside the body;

an operator at said proximal end;

an actuator extending in said catheter tube from said operator in an area adjacent said distal end, having an actuating element with a pull cable movable longitudinally in said catheter tube and controlled by said operator, and having at least one control part with a distal end edge on a sleeve-shaped receiving part; and

at least one clip adjacent to and directly engaging said distal end edge and having a part received in said actuating element and two adjacent legs, said legs having first kinks extending outwardly and increasing a distance between said legs in first areas of said legs and second kinks extending inwardly and forming a mutual support for said legs in second areas of said legs nearer to a distal leg end of said clip than said first area, but spaced from said distal leg end without said legs crossing one another, said clip being connected to said pull cable by a rear end crosspiece connecting said legs of said clip, said rear end crosspiece having two adjacent through holes through which said pull cable extends in a loop connecting an advancing strand extending from said operator to said rear end crosspiece to a retreating strand extending to said operator from said rear end crosspiece, said rear end crosspiece having a section between said

through holes forming a predetermined breaking point fracturable by a pulling force of said pull cable via said loop thereof to detach said pull cable from said clip;

whereby said legs are opened by said first kinks engaging said control part when said clip is inserted into said sleeve-shaped receiving part which converts an actuating force of said actuating element into an opening motion of said legs with said second areas engaging one another.

17. (currently amended) A device according to claim 14 wherein

~~said rear end crosspiece comprises a section between said through holes forming a predetermined breaking point fracturable by a pulling force of said pull cable via said loop thereof to detach said pull cable from said clip said through holes being are parallel and laterally offset.~~

18. (currently amended) A device according to claim 4714 wherein

a blocking element is located on said distal end of said catheter tube, said blocking element permitting passage of said sleeve-shaped receiving part only in an exit direction forward from said catheter tube and supporting said sleeve-shaped receiving part against motion rearwardly into said catheter tube effected by the pulling force of said pull cable.

23. (currently amended) A self-closing medical clip, comprising:

a crosspiece having two adjacent through holes therein and a predetermined breaking point extending between said through holes;

first and second legs extending adjacent one another from said crosspiece to distal ends thereof and biased toward one another, said crosspiece extending between and directly connecting adjacent ends of said legs;

a pull cable extending through said through holes in a loop connecting an advancing strand extending to said crosspiece and a retreating strand extending away from said crosspiece and laterally adjacent said advancing strand, said predetermined breaking point being fracturable by a pulling force of said pull cable via said loop to detach said cable from said crosspiece;

first kinks in said legs extending outwardly and increasing a distance between said legs in first areas of said legs; and

second kinks in said legs extending inwardly and forming a mutual support for said legs in second areas of said legs, said second areas being nearer said distal ends than said first areas but being spaced from said distal ends.

25. (currently amended) A self-closing medical clip according to claim 23 wherein

~~said crosspiece has a predetermined breaking point extending between said through holes said through holes being are parallel and laterally offset.~~

29. (currently amended) A method for endoscopic application of self-closing medical clips, comprising the steps of:

placing a distal end of a catheter tube in a body of a living being to be treated;

arranging at least one self-closing medical clip with relatively movable legs in the catheter tube adjacent the distal end by an operator located on a proximal end of the catheter tube, the clip having a first kink in a first area of each leg extending outwardly and increasing a distance between the legs and a second kink in a second area nearer a distal leg end of the clip than the first area but spaced from the distal leg end extending inwardly and forming a point of mutual support for the legs;

pushing the clip out of the distal end;

opening the clip by an actuator having an actuating element with a pull cable acting on the clip, being movable longitudinally in the catheter tube, being actuated by the operator and having a control part converting an actuating force of the actuating element into a motion opening the legs of the clip by pressing on each first kink inwardly to cause the legs to pivot at and about the mutual support such that leg portions between the second kinks and distal leg ends open, the clip being connected to the pull cable by a rear end crosspiece connecting the legs of the clip, the rear end crosspiece having two adjacent through holes through which the pull cable extends in a loop connecting an advancing strand extending from the operator to the rear end crosspiece to a retreating strand extending to the operator from the rear end crosspiece, the crosspiece having a section between the through holes forming a predetermined breaking point; and; and

detaching the actuating element from the clip after opening of the clip to release and close the legs of the clip to apply the clip by the resiliency of the clip alone without attaching another member to the clip and detaching the pull cable from the clip

by applying a pulling force on the pull cable to fracture the predetermined breaking point.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: The prior art fails to disclose or suggest, in combination with other limitations of the claims, said clip being connected to said pull cable by a rear end crosspiece connecting said legs of said clip, said rear end crosspiece having two adjacent through holes through which said pull cable extends in a loop connecting an advancing strand extending from said operator to said rear end crosspiece to a retreating strand extending to said operator from said rear end crosspiece, said rear end crosspiece having a section between said through holes forming a predetermined breaking point fracturable by a pulling force of said pull cable via said loop thereof to detach said pull cable from said clip.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JING OU whose telephone number is (571)270-5036. The examiner can normally be reached on M-F 7:30am - 5:00pm, Alternative Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Uyen (Jackie) T Ho can be reached on (571)272-4696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. O./
Examiner, Art Unit 3773
03/11/2010

/(Jackie) Tan-Uyen T. Ho/
Supervisory Patent Examiner, Art Unit 3773